

AUTOKLAAVITUD SARRUSTATUD POORBETOONIST  
VALMISTOOTED

Prefabricated reinforced components of autoclaved  
aerated concrete

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

|                                                                                                                     |                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| See Eesti standard EVS-EN 12602:2016 sisaldab Euroopa standardi EN 12602:2016 ingliskeelset teksti.                 | This Estonian standard EVS-EN 12602:2016 consists of the English text of the European standard EN 12602:2016.                      |
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English Version

## Prefabricated reinforced components of autoclaved aerated concrete

Éléments préfabriqués armés en béton cellulaire  
autoclavé

Vorgefertigte bewehrte Bauteile aus dampfgehärtetem  
Porenbeton

This European Standard was approved by CEN on 4 June 2016.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

# Contents

Page

|                                                                                                 |           |
|-------------------------------------------------------------------------------------------------|-----------|
| European foreword.....                                                                          | 6         |
| <b>1 Scope.....</b>                                                                             | <b>8</b>  |
| <b>2 Normative references.....</b>                                                              | <b>8</b>  |
| <b>3 Terms, definitions, symbols and abbreviations.....</b>                                     | <b>10</b> |
| 3.1 Terms and definitions .....                                                                 | 10        |
| 3.2 Symbols.....                                                                                | 11        |
| 3.2.1 General symbols .....                                                                     | 11        |
| 3.2.2 Subscripts.....                                                                           | 12        |
| 3.2.3 Symbols used in this European Standard (including normative annexes, except Annex C)..... | 12        |
| 3.3 Abbreviations.....                                                                          | 19        |
| <b>4 Properties and requirements of materials .....</b>                                         | <b>20</b> |
| 4.1 Constituent materials of autoclaved aerated concrete .....                                  | 20        |
| 4.1.1 General.....                                                                              | 20        |
| 4.1.2 Release of dangerous substances.....                                                      | 20        |
| 4.2 Autoclaved aerated concrete parameters.....                                                 | 20        |
| 4.2.1 General.....                                                                              | 20        |
| 4.2.2 Dry density .....                                                                         | 21        |
| 4.2.3 Characteristic strength values.....                                                       | 22        |
| 4.2.4 Compressive strength.....                                                                 | 22        |
| 4.2.5 Tensile strength and flexural strength.....                                               | 23        |
| 4.2.6 Stress-strain diagram .....                                                               | 23        |
| 4.2.7 Modulus of elasticity .....                                                               | 23        |
| 4.2.8 Poisson's ratio .....                                                                     | 24        |
| 4.2.9 Coefficient of thermal expansion.....                                                     | 24        |
| 4.2.10 Drying shrinkage.....                                                                    | 24        |
| 4.2.11 Creep.....                                                                               | 24        |
| 4.2.12 Specific heat .....                                                                      | 25        |
| 4.2.13 Thermal conductivity .....                                                               | 25        |
| 4.2.14 Water vapour permeability.....                                                           | 27        |
| 4.2.15 Water tightness.....                                                                     | 27        |
| 4.3 Reinforcement.....                                                                          | 27        |
| 4.3.1 Steel.....                                                                                | 27        |
| 4.3.2 Structural reinforcement .....                                                            | 28        |
| 4.3.3 Effective diameter of coated bars.....                                                    | 29        |
| 4.3.4 Non-structural reinforcement.....                                                         | 30        |
| 4.4 Bond .....                                                                                  | 30        |
| 4.5 Thermal prestress .....                                                                     | 31        |
| 4.5.1 General.....                                                                              | 31        |
| 4.5.2 Declared mean initial prestrain $\varepsilon_{0m,g}$ .....                                | 32        |
| <b>5 Properties and requirements of components.....</b>                                         | <b>32</b> |
| 5.1 General.....                                                                                | 32        |
| 5.1.1 Mechanical resistance .....                                                               | 32        |
| 5.1.2 Acoustic properties .....                                                                 | 32        |
| 5.1.3 Reaction to fire and resistance to fire.....                                              | 33        |
| 5.1.4 Design thermal resistance and design thermal conductivity.....                            | 33        |
| 5.2 Technical requirements and declared properties .....                                        | 34        |

|                     |                                                                                                             |    |
|---------------------|-------------------------------------------------------------------------------------------------------------|----|
| 5.2.1               | Dimensions and tolerances.....                                                                              | 34 |
| 5.2.2               | Mass of the components.....                                                                                 | 34 |
| 5.2.3               | Dimensional stability.....                                                                                  | 34 |
| 5.2.4               | Load-bearing capacity.....                                                                                  | 35 |
| 5.2.5               | Deflections.....                                                                                            | 36 |
| 5.2.6               | Joint strength.....                                                                                         | 36 |
| 5.2.7               | Minimum requirements.....                                                                                   | 36 |
| 5.3                 | Durability.....                                                                                             | 38 |
| 5.3.1               | General.....                                                                                                | 38 |
| 5.3.2               | Environmental conditions.....                                                                               | 38 |
| 5.3.3               | Corrosion protection of reinforcement.....                                                                  | 39 |
| 5.3.4               | Freeze and thaw resistance.....                                                                             | 40 |
| 6                   | Assessment and verification of constancy of performance – AVCP.....                                         | 40 |
| 6.1                 | Introduction.....                                                                                           | 40 |
| 6.2                 | Type testing.....                                                                                           | 40 |
| 6.2.1               | General.....                                                                                                | 40 |
| 6.2.2               | Test samples, testing and compliance criteria.....                                                          | 41 |
| 6.2.3               | Test reports.....                                                                                           | 46 |
| 6.2.4               | Shared other party results.....                                                                             | 46 |
| 6.2.5               | Additional provisions for structural elements/components and/or structural kits.....                        | 46 |
| 6.2.6               | Additional provisions for semi-structural elements/components and/or semi-structural kits.....              | 47 |
| 6.3                 | Factory production control (FPC).....                                                                       | 48 |
| 6.3.1               | General.....                                                                                                | 48 |
| 6.3.2               | Requirements.....                                                                                           | 48 |
| 6.3.3               | Product specific requirements.....                                                                          | 57 |
| 6.3.4               | Initial inspection of factory and of FPC.....                                                               | 57 |
| 6.3.5               | Continuous surveillance of FPC.....                                                                         | 59 |
| 6.3.6               | Procedure for modifications.....                                                                            | 60 |
| 6.3.7               | One-off products, pre-production products (e.g. prototypes) and products produced in very low quantity..... | 60 |
| 7                   | Basis for design.....                                                                                       | 61 |
| 7.1                 | Design methods.....                                                                                         | 61 |
| 7.2                 | Limit states.....                                                                                           | 61 |
| 7.3                 | Actions.....                                                                                                | 61 |
| 8                   | Marking, labelling and designation.....                                                                     | 62 |
| 8.1                 | Standard designation.....                                                                                   | 62 |
| 8.2                 | Production detail information.....                                                                          | 63 |
| 8.3                 | Additional information on accompanying documents.....                                                       | 63 |
| Annex A (normative) | Design by calculation.....                                                                                  | 64 |
| A.1                 | General.....                                                                                                | 64 |
| A.2                 | Ultimate limit states (ULS) General design assumptions.....                                                 | 64 |
| A.3                 | Ultimate limit states (ULS): design for bending and combined bending and axial compression.....             | 66 |
| A.3.1               | Design assumptions.....                                                                                     | 66 |
| A.3.2               | Stress-strain diagram for AAC.....                                                                          | 66 |
| A.3.3               | Stress-strain diagram for reinforcing steel.....                                                            | 67 |
| A.3.4               | Minimum reinforcement.....                                                                                  | 69 |
| A.4                 | Shear.....                                                                                                  | 70 |
| A.4.1               | Shear design for components predominantly under transverse load.....                                        | 70 |
| A.5                 | Ultimate limit states induced by structural deformation (buckling).....                                     | 75 |
| A.5.1               | General.....                                                                                                | 75 |
| A.5.2               | Method based on Euler formula.....                                                                          | 75 |
| A.5.3               | Modified model column method.....                                                                           | 77 |

|                 |                                                                                                                        |            |
|-----------------|------------------------------------------------------------------------------------------------------------------------|------------|
| <b>A.6</b>      | <b>Punching.....</b>                                                                                                   | <b>82</b>  |
| <b>A.6.1</b>    | <b>General.....</b>                                                                                                    | <b>82</b>  |
| <b>A.6.2</b>    | <b>Scope and definitions.....</b>                                                                                      | <b>82</b>  |
| <b>A.6.3</b>    | <b>Design method for punching shear.....</b>                                                                           | <b>84</b>  |
| <b>A.7</b>      | <b>Primary torsion/combined primary torsion and shear.....</b>                                                         | <b>85</b>  |
| <b>A.8</b>      | <b>Concentrated forces .....</b>                                                                                       | <b>87</b>  |
| <b>A.9</b>      | <b>Serviceability limit states (SLS) .....</b>                                                                         | <b>88</b>  |
| <b>A.9.1</b>    | <b>General.....</b>                                                                                                    | <b>88</b>  |
| <b>A.9.2</b>    | <b>Limitation of stresses under serviceability conditions.....</b>                                                     | <b>88</b>  |
| <b>A.9.3</b>    | <b>Serviceability limit states of cracking.....</b>                                                                    | <b>89</b>  |
| <b>A.9.4</b>    | <b>Serviceability limit states of deformation.....</b>                                                                 | <b>89</b>  |
| <b>A.10</b>     | <b>Detailing of reinforcement .....</b>                                                                                | <b>92</b>  |
| <b>A.10.1</b>   | <b>General.....</b>                                                                                                    | <b>92</b>  |
| <b>A.10.2</b>   | <b>Bond.....</b>                                                                                                       | <b>93</b>  |
| <b>A.10.3</b>   | <b>Anchorage.....</b>                                                                                                  | <b>93</b>  |
| <b>A.11</b>     | <b>Support length.....</b>                                                                                             | <b>97</b>  |
| <b>Annex B</b>  | <b>(normative) Design by testing.....</b>                                                                              | <b>98</b>  |
| <b>B.1</b>      | <b>General.....</b>                                                                                                    | <b>98</b>  |
| <b>B.2</b>      | <b>Safety evaluation .....</b>                                                                                         | <b>99</b>  |
| <b>B.2.1</b>    | <b>General.....</b>                                                                                                    | <b>99</b>  |
| <b>B.2.2</b>    | <b>Brittle and ductile failure.....</b>                                                                                | <b>99</b>  |
| <b>B.3</b>      | <b>Ultimate limit state.....</b>                                                                                       | <b>99</b>  |
| <b>B.3.1</b>    | <b>General.....</b>                                                                                                    | <b>99</b>  |
| <b>B.3.2</b>    | <b>Transversely loaded components.....</b>                                                                             | <b>99</b>  |
| <b>B.3.3</b>    | <b>Longitudinally loaded components.....</b>                                                                           | <b>102</b> |
| <b>B.3.4</b>    | <b>Simultaneously transversely and longitudinally loaded wall components.....</b>                                      | <b>104</b> |
| <b>B.3.5</b>    | <b>Anchorage.....</b>                                                                                                  | <b>105</b> |
| <b>B.4</b>      | <b>Serviceability limit states.....</b>                                                                                | <b>107</b> |
| <b>B.4.1</b>    | <b>Crack width control .....</b>                                                                                       | <b>107</b> |
| <b>B.4.2</b>    | <b>Deformations.....</b>                                                                                               | <b>107</b> |
| <b>Annex C</b>  | <b>(normative) Resistance to fire design of AAC components and structures .....</b>                                    | <b>108</b> |
| <b>C.1</b>      | <b>General.....</b>                                                                                                    | <b>108</b> |
| <b>C.1.1</b>    | <b>Scope .....</b>                                                                                                     | <b>108</b> |
| <b>C.1.2</b>    | <b>Distinction between principles and application rules .....</b>                                                      | <b>108</b> |
| <b>C.1.3</b>    | <b>Terms and definitions .....</b>                                                                                     | <b>108</b> |
| <b>C.1.4</b>    | <b>Symbols.....</b>                                                                                                    | <b>111</b> |
| <b>C.1.5</b>    | <b>Units.....</b>                                                                                                      | <b>112</b> |
| <b>C.2</b>      | <b>Basic principles.....</b>                                                                                           | <b>112</b> |
| <b>C.2.1</b>    | <b>Performance requirements.....</b>                                                                                   | <b>112</b> |
| <b>C.2.2</b>    | <b>Design values of material properties.....</b>                                                                       | <b>112</b> |
| <b>C.2.3</b>    | <b>Assessment methods.....</b>                                                                                         | <b>113</b> |
| <b>C.3</b>      | <b>Material properties .....</b>                                                                                       | <b>113</b> |
| <b>C.3.1</b>    | <b>General.....</b>                                                                                                    | <b>113</b> |
| <b>C.3.2</b>    | <b>AAC .....</b>                                                                                                       | <b>114</b> |
| <b>C.3.3</b>    | <b>Steel.....</b>                                                                                                      | <b>115</b> |
| <b>C.4</b>      | <b>Structural fire design methods.....</b>                                                                             | <b>117</b> |
| <b>C.4.1</b>    | <b>General.....</b>                                                                                                    | <b>117</b> |
| <b>C.4.2</b>    | <b>Tabulated data .....</b>                                                                                            | <b>117</b> |
| <b>C.4.3</b>    | <b>Simplified design methods .....</b>                                                                                 | <b>122</b> |
| <b>C.4.4</b>    | <b>Anchorage.....</b>                                                                                                  | <b>126</b> |
| <b>C.5</b>      | <b>Protective layers.....</b>                                                                                          | <b>126</b> |
| <b>Annex CA</b> | <b>(normative) Modulus of elasticity and maximum strain of AAC and reinforcing steel at elevated temperature .....</b> | <b>127</b> |
| <b>Annex CB</b> | <b>(informative) Joints between AAC components satisfying resistance to fire E.....</b>                                | <b>129</b> |

|                                                                                                                                                                                                            |                                                                                             |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----|
| CB.1                                                                                                                                                                                                       | Floor and roof components with dry joints.....                                              | 129 |
| CB.2                                                                                                                                                                                                       | Floor and roof components with mortar joints .....                                          | 129 |
| CB.3                                                                                                                                                                                                       | Vertical and horizontal wall components with dry joints .....                               | 130 |
| CB.4                                                                                                                                                                                                       | Vertical and horizontal wall components with mortar joints .....                            | 130 |
| <b>Annex CC (normative) Temperature profiles of AAC wall, floor and roof components and AAC beams 132</b>                                                                                                  |                                                                                             |     |
| CC.1                                                                                                                                                                                                       | Basis of temperature profiles.....                                                          | 132 |
| CC.2                                                                                                                                                                                                       | Temperature profiles for AAC wall, floor and roof components .....                          | 132 |
| CC.3                                                                                                                                                                                                       | Temperature profiles for AAC beams.....                                                     | 135 |
| CC.4                                                                                                                                                                                                       | Calculation assumptions .....                                                               | 144 |
| <b>Annex CD (normative) Resistance to fire tabulated data for walls with mechanical impact..... 145</b>                                                                                                    |                                                                                             |     |
| <b>Annex D (informative) Recommended values for partial safety factors ..... 147</b>                                                                                                                       |                                                                                             |     |
| D.1                                                                                                                                                                                                        | General .....                                                                               | 147 |
| D.2                                                                                                                                                                                                        | Ultimate Limit States (ULS) .....                                                           | 147 |
| D.3                                                                                                                                                                                                        | Serviceability Limit States (SLS).....                                                      | 149 |
| <b>Annex E (informative) Recommendations for the consideration of prestress in the design of prefabricated reinforced AAC components..... 150</b>                                                          |                                                                                             |     |
| E.1                                                                                                                                                                                                        | Calculation of prestrain from test results.....                                             | 150 |
| E.1.1                                                                                                                                                                                                      | General .....                                                                               | 150 |
| E.1.2                                                                                                                                                                                                      | Symbols .....                                                                               | 151 |
| E.1.3                                                                                                                                                                                                      | Cross-section values of AAC components.....                                                 | 152 |
| E.1.4                                                                                                                                                                                                      | Calculation of prestrain $\varepsilon_0$ from steel measurement.....                        | 152 |
| E.2                                                                                                                                                                                                        | Cross-sectional analysis of a AAC component in SLS if prestress is taken into account ..... | 152 |
| E.3                                                                                                                                                                                                        | Splitting forces due to prestress .....                                                     | 153 |
| E.4                                                                                                                                                                                                        | Methods to prevent end cracks due to prestress .....                                        | 153 |
| <b>Annex F (informative) Statistical methods for quality control ..... 154</b>                                                                                                                             |                                                                                             |     |
| <b>Annex G (normative) Factory production control of stainless reinforcing steel based on at least three samples – Minimum acceptance criteria for individual values and corresponding mean values 156</b> |                                                                                             |     |
| <b>Annex H (informative) Methods for declaring the mechanical and fire resistance performances in ENs for structural elements..... 157</b>                                                                 |                                                                                             |     |
| H.1                                                                                                                                                                                                        | Declaration methods .....                                                                   | 157 |
| H.2                                                                                                                                                                                                        | Method M1.....                                                                              | 157 |
| H.3                                                                                                                                                                                                        | Method M2.....                                                                              | 157 |
| H.4                                                                                                                                                                                                        | Method M3a .....                                                                            | 158 |
| H.5                                                                                                                                                                                                        | Method M3b .....                                                                            | 158 |
| <b>Annex ZA (informative) Relationship of this European Standard with Regulation (EU) No.305/2011..... 160</b>                                                                                             |                                                                                             |     |
| ZA.1                                                                                                                                                                                                       | Scope and relevant characteristics .....                                                    | 160 |
| ZA.2                                                                                                                                                                                                       | System of Assessment and Verification of Constancy of Performance (AVCP) .....              | 176 |
| ZA.3                                                                                                                                                                                                       | Assignment of AVCP tasks .....                                                              | 176 |
| <b>Bibliography ..... 179</b>                                                                                                                                                                              |                                                                                             |     |

## European foreword

This document (EN 12602:2016) has been prepared by Technical Committee CEN/TC 177 “Prefabricated reinforced components of autoclaved aerated concrete or light-weight aggregate concrete with open structure”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2017, and conflicting national standards shall be withdrawn at the latest by June 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12602:2008+A1:2013.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Regulation (s).

For relationship with Regulation (EU) No. 305/2011, see informative Annex ZA, which is an integral part of this document.

This document uses the methods given in the Guidance paper L, Clause 3.3, of the European Commission.

This European Standard is used together with a national application document. The national application document may only contain information on those parameters which are left open in this European Standard for national choice, known as Nationally Determined Parameters, to be used for the design of the construction products and civil engineering works to be constructed in the country concerned, i.e.:

- values and/or classes where alternatives are given in this European Standard,
- values to be used where a symbol only is given in this European Standard,
- country specific data (geographical, climatic, etc.), e.g. snow map,
- procedure to be used where alternative procedures are given in this European Standard.
- decisions on the application of informative annexes,
- references to non-contradictory complementary information to assist the user to apply this European Standard:

|               |           |
|---------------|-----------|
| 4.2.2.4       | A.8       |
| 5.1.4         | A.9.4.1   |
| 5.3.4         | A.10.2.2  |
| A.3.2         | A.10.3    |
| A.3.3         | B.3.2.2   |
| A.4.1.2       | B.3.3.2   |
| A.4.1.3.1 (7) | B.3.3.3.2 |
| A.4.1.3.2     | Annex D   |
| A.4.1.3.3     |           |

A.5.2

A.5.3.3.3 (3)

A.6.3

A.7

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## 1 Scope

This European Standard is for prefabricated reinforced components of autoclaved aerated concrete to be used in building construction for:

a) Structural elements:

- loadbearing wall components;
- retaining wall components;
- roof components;
- floor components;
- linear components (beams and piers).

b) Non-structural elements:

- non-loadbearing wall components (partition walls);
- cladding components (without fixtures) intended to be used for external facades of buildings;
- small box culverts used to form channels for the enclosure of services;
- components for noise barriers.

Depending on the type and intended use of elements for which the components are utilized, the components can be applied – in addition to their loadbearing and encasing function – for purposes of fire resistance, sound insulation and thermal insulation indicated in the relevant clauses of this European Standard.

Components covered by this standard are only intended to be subjected to predominantly non-dynamic actions, unless special measures are introduced in the relevant clauses of this European Standard.

The term “reinforced” relates to reinforcement used for both structural and non-structural purposes.

This European Standard does not cover:

- rules for the application of these components in structures;
- joints (except their strength and integrity E of resistance to fire);
- fixtures;
- finishes for external components, such as tiling.

NOTE AAC components may be used in noise barriers if they are designed to fulfil also the requirements of EN 14388.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 678, *Determination of the dry density of autoclaved aerated concrete*

EN 679, *Determination of the compressive strength of autoclaved aerated concrete*

- EN 680, *Determination of the drying shrinkage of autoclaved aerated concrete*
- EN 772-16, *Methods of test for masonry units - Part 16: Determination of dimensions*
- EN 772-20, *Methods of test for masonry units - Part 20: Determination of flatness of faces of aggregate concrete, manufactured stone and natural stone masonry units*
- EN 989, *Determination of the bond behaviour between reinforcing bars and autoclaved aerated concrete by the "Push-Out" test*
- EN 990, *Test methods for verification of corrosion protection of reinforcement in autoclaved aerated concrete and lightweight aggregate concrete with open structure*
- EN 991, *Determination of the dimensions of prefabricated reinforced components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure*
- EN 1351, *Determination of flexural strength of autoclaved aerated concrete*
- EN 1352, *Determination of static modulus of elasticity under compression of autoclaved aerated concrete or lightweight aggregate concrete with open structure*
- EN 1355, *Determination of creep strains under compression of autoclaved aerated concrete or lightweight aggregate concrete with open structure*
- EN 1356, *Performance test for prefabricated reinforced components of autoclaved aerated concrete or lightweight aggregate concrete with open structure under transverse load*
- EN 15304, *Determination of the freeze-thaw resistance of autoclaved aerated concrete*
- EN 1737, *Determination of shear strength of welded joints of reinforcement mats or cages for prefabricated components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure*
- EN 1738, *Determination of steel stresses in unloaded reinforced components made of autoclaved aerated concrete*
- EN 1739, *Determination of shear strength for in-plane forces of joints between prefabricated components of autoclaved aerated concrete or lightweight aggregate concrete with open structure*
- EN 1740, *Performance test for prefabricated reinforced components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure under predominantly longitudinal load (vertical components)*
- EN 1741, *Determination of shear strength for out-of-plane forces of joints between prefabricated components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure*
- EN 1742, *Determination of shear strength between different layers of multilayer components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure*
- EN 1992-1-1:2004, *Eurocode 2: Design of concrete structures - Part 1-1: General rules and rules for buildings*
- EN 10080, *Steel for the reinforcement of concrete - Weldable reinforcing steel - General*
- EN 10088-5, *Stainless steels - Part 5: Technical delivery conditions for bars, rods, wire, sections and bright products of corrosion resisting steels for construction purposes*
- EN 12269-1, *Determination of the bond behaviour between reinforcing steel and autoclaved aerated concrete by the "beam test" - Part 1: Short term test*

EN 12269-2, *Determination of the bond behaviour between reinforcing steel and autoclaved aerated concrete by the beam test - Part 2: Long term test*

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EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using test data from reaction to fire tests*

EN 13501-2, *Fire classification of construction products and building elements — Part 2: Classification using data from fire resistance tests, excluding ventilation services*

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EN ISO 354, *Acoustics - Measurement of sound absorption in a reverberation room (ISO 354)*

EN ISO 717-1, *Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation (ISO 717-1)*

EN ISO 717-2, *Acoustics - Rating of sound insulation in buildings and of building elements - Part 2: Impact sound insulation (ISO 717-2)*

EN ISO 10456, *Building materials and products - Hygrothermal properties - Tabulated design values and procedures for determining declared and design thermal values (ISO 10456)*

EN ISO 10140-1, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 1: Application rules for specific products (ISO 10140-1)*

EN ISO 10140-2, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 2: Measurement of airborne sound insulation (ISO 10140-2)*

EN ISO 10140-3, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 3: Measurement of impact sound insulation (ISO 10140-3)*

EN ISO 10140-4, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 4: Measurement of impact sound insulation (ISO 10140-4)*

EN ISO 10140-5, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 5: Requirements for test facilities and equipment (ISO 10140-5)*

EN ISO 15630-1, *Steel for the reinforcement and prestressing of concrete - Test methods - Part 1: Reinforcing bars, wire rod and wire (ISO 15630-1)*

### **3 Terms, definitions, symbols and abbreviations**

#### **3.1 Terms and definitions**

For the purposes of this document, the following terms and definitions apply.

##### **3.1.1**

##### **autoclaved aerated concrete**

##### **AAC**

concrete that is manufactured from binders such as cement and/or lime combined with fine siliceous based material, cell generating material and water whereby the raw materials are mixed together and cast into